

27. (New) The isolated DNA molecule according to claim 26, wherein said apoptosis or tumor suppression is induced by p53 or p21.

28. (New) The isolated DNA molecule according to claim 26, wherein the expression of said TSAP 9 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

29. (New) A vector comprising said isolated DNA molecule of claim 26.

30. (New) The vector of claim 29, wherein said vector is a viral vector.

31. (New) The vector of claim 30, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

32. (New) The vector of claim 29, wherein said vector is a naked nucleic acid vector.

33. (New) An isolated or cultured host cell stably transformed with the vector of claim 29.

34. (New) A protein obtained from culturing said transformed host cell according to claim 33, wherein said protein is TSAP 9.

35. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 9, wherein the expression of said TSAP 9 is induced during apoptosis or tumor suppression.

36. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 26.

37. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 36.

38. (New) An isolated DNA molecule encoding TSAP 10, said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:2, wherein the expression of said TSAP 10 is induced during apoptosis or tumor suppression.

39. (New) The isolated DNA molecule according to claim 38, wherein said apoptosis or tumor suppression is induced by p53 or p21.

40. (New) The isolated DNA molecule according to claim 38, wherein the expression of said TSAP 10 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

41. (New) A vector comprising said isolated DNA molecule of claim 38.

42. (New) The vector of claim 41, wherein said vector is a viral vector.

43. (New) The vector of claim 42, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

44. (New) The vector of claim 41, wherein said vector is a naked nucleic acid vector.

45. (New) An isolated or cultured host cell stably transformed with the vector of claim 41.

46. (New) A protein obtained from culturing said transformed host cell according to claim 45, wherein said protein is TSAP 10.

47. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 10, wherein the expression of said TSAP 10 is induced during apoptosis or tumor suppression.

48. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 38.

49. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 48.

50. (New) An isolated DNA molecule encoding TSAP 11 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:3, wherein the expression of said TSAP 11 is induced during apoptosis or tumor suppression.

*31
Cont*

51. (New) The isolated DNA molecule according to claim 50, wherein said apoptosis or tumor suppression is induced by p53 or p21.

52. (New) The isolated DNA molecule according to claim 50, wherein the expression of said TSAP 11 is not activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

53. (New) A vector comprising said isolated DNA molecule of claim 50.

54. (New) The vector of claim 53, wherein said vector is a viral vector.

55. (New) The vector of claim 54, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

56. (New) The vector of claim 53, wherein said vector is a naked nucleic acid vector.

57. (New) An isolated or cultured host cell stably transformed with the vector of claim 53.

58. (New) A protein obtained from culturing said transformed host cell according to claim 57, wherein said protein is TSAP 11.

59. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 11, the expression of said TSAP 11 is induced during apoptosis or tumor suppression.

60. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 50.

61. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 60.

62. (New) An isolated DNA molecule encoding TSAP 12 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:4, wherein the expression of said TSAP 12 is induced during apoptosis or tumor suppression.

63. (New) The isolated DNA molecule according to claim 62, wherein said apoptosis or tumor suppression is induced by p53 or p21.

64. (New) The isolated DNA molecule according to claim 62, wherein the expression of said TSAP 12 is not activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

65. (New) A vector comprising said isolated DNA molecule of claim 62.

66. (New) The vector of claim 65, wherein said vector is a viral vector.

67. (New) The vector of claim 66, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

68. (New) The vector of claim 65, wherein said vector is a naked nucleic acid vector.

69. (New) An isolated or cultured host cell stably transformed with the vector of claim 65.

70. (New) A protein obtained from culturing said transformed host cell according to claim 69, wherein said protein is TSAP 12.

71. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 12, wherein the expression of said TSAP 12 is induced during apoptosis or tumor suppression.

72. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 62.

73. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 72.

74. (New) An isolated DNA molecule encoding TSAP 13 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:5, wherein the expression of said TSAP 13 is induced during apoptosis or tumor suppression.

B-Conf

75. (New) The isolated DNA molecule according to claim 74, wherein said apoptosis or tumor suppression is induced by p53 or p21.

76. (New) The isolated DNA molecule according to claim 74, wherein the expression of said TSAP 13 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

77. (New) A vector comprising said isolated DNA molecule of claim 74.

78. (New) The vector of claim 77, wherein said vector is a viral vector.

79. (New) The vector of claim 78, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

80. (New) The vector of claim 77, wherein said vector is a naked nucleic acid vector.

81. (New) An isolated or cultured host cell stably transformed with the vector of claim 77.

82. (New) A protein obtained from culturing said transformed host cell according to claim 81, wherein said protein is TSAP 13.

83. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 13, the expression of said TSAP 13 is induced during apoptosis or tumor suppression.

84. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 74.

85. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 84.

86. (New) An isolated DNA molecule encoding TSAP 14 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:6, wherein the expression of said TSAP 14 is induced during apoptosis or tumor suppression.

*B1
Conf*

87. (New) The isolated DNA molecule according to claim 86, wherein said apoptosis or tumor suppression is induced by p53 or p21.

88. (New) The isolated DNA molecule according to claim 86, wherein the expression of said TSAP 14 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

89. (New) A vector comprising said isolated DNA molecule of claim 86.

90. (New) The vector of claim 89, wherein said vector is a viral vector.

91. (New) The vector of claim 90, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

92. (New) The vector of claim 89, wherein said vector is a naked nucleic acid vector.

93. (New) An isolated or cultured host cell stably transformed with the vector of claim 89.

94. (New) A protein obtained from culturing said transformed host cell according to claim 93, wherein said protein is TSAP 14.

95. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 14, wherein the expression of said TSAP 14 is induced during apoptosis or tumor suppression.

96. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 86.

97. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 96.

98. (New) An isolated DNA molecule encoding TSAP 15 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:7, wherein the expression of said TSAP 15 induced during apoptosis or tumor suppression.

B/cont

99. (New) The isolated DNA molecule according to claim 98, wherein said apoptosis or tumor suppression is induced by p53 or p21.

100. (New) The isolated DNA molecule according to claim 98, wherein the expression of said TSAP 15 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

101. (New) A vector comprising said isolated DNA molecule of claim 98.

102. (New) The vector of claim 101, wherein said vector is a viral vector.

103. (New) The vector of claim 102, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

104. (New) The vector of claim 101, wherein said vector is a naked nucleic acid vector.

105. (New) An isolated or cultured host cell stably transformed with the vector of claim 101.

106. (New) A protein obtained from culturing said transformed host cell according to claim 105, wherein said protein is TSAP 15.

107. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 15, wherein the expression of said TSAP 15 induced during apoptosis or tumor suppression.

108. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 98.

109. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 108.

110. (New) An isolated DNA molecule encoding TSAP 16 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:8, wherein the expression of said TSAP 16 is induced during apoptosis or tumor suppression.

111. (New) The isolated DNA molecule according to claim 110, wherein said apoptosis or tumor suppression is induced by p53 or p21.

112. (New) The isolated DNA molecule according to claim 110, wherein the expression of said TSAP 16 is activated by TSAP 3 transfectants.

113. (New) A vector comprising said isolated DNA molecule of claim 110.

114. (New) The vector of claim 113, wherein said vector is a viral vector.

115. (New) The vector of claim 114, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

116. (New) The vector of claim 113, wherein said vector is a naked nucleic acid vector.

117. (New) An isolated or cultured host cell stably transformed with the vector of claim 113.

118. (New) A protein obtained from culturing said transformed host cell according to claim 110, wherein said protein is TSAP 16.

119. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 16, the expression of said TSAP 16 induced during apoptosis or tumor suppression.

120. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 110.

121. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 120.

122. (New) An isolated DNA molecule encoding TSAP 17 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:9, wherein the expression of said TSAP 17 is induced during apoptosis or tumor suppression.

*B1
Cont*

123. (New) The isolated DNA molecule according to claim 122, wherein said apoptosis or tumor suppression is induced by p53 or p21.

124. (New) The isolated DNA molecule according to claim 122, wherein the expression of said TSAP 17 is activated by p21 transfectants.

125. (New) A vector comprising said isolated DNA molecule of claim 122.

126. (New) The vector of claim 125, wherein said vector is a viral vector.

127. (New) The vector of claim 126, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

128. (New) The vector of claim 125, wherein said vector is a naked nucleic acid vector.

129. (New) An isolated or cultured host cell stably transformed with the vector of claim 125.

130. (New) A protein obtained from culturing said transformed host cell according to claim 129, wherein said protein is TSAP 17.

131. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 17, wherein the expression of said TSAP 17 is induced during apoptosis or tumor suppression.

132. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 122.

133. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 132.

134. (New) An isolated DNA molecule encoding TSAP 18 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:10, wherein the expression of said TSAP 18 induced during apoptosis or tumor suppression.

CP/Cont

135. (New) The isolated DNA molecule according to claim 134, wherein said apoptosis or tumor suppression is induced by p53 or p21.

136. (New) The isolated DNA molecule according to claim 134, wherein the expression of said TSAP 18 is activated by TSAP 3 and anti-sense TSIP 2 transfectants.

137. (New) A vector comprising said isolated DNA molecule of claim 134.

138. (New) The vector of claim 137, wherein said vector is a viral vector.

139. (New) The vector of claim 138, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

140. (New) The vector of claim 137, wherein said vector is a naked nucleic acid vector.

141. (New) An isolated or cultured host cell stably transformed with the vector of claim 137.

142. (New) A protein obtained from culturing said transformed host cell according to claim 141, wherein said protein is TSAP 18.

143. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 18, wherein the expression of said TSAP 18 is induced during apoptosis or tumor suppression.

144. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 134.

145. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 144.

146. (New) An isolated DNA molecule encoding TSAP 19, said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:11, wherein the expression of said TSAP 19 is induced during apoptosis or tumor suppression.

B'nt

147. (New) The isolated DNA molecule according to claim 146, wherein said apoptosis or tumor suppression is induced by p53 or p21.

148. (New) The isolated DNA molecule according to claim 146, wherein the expression of said TSAP 19 is not activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

149. (New) A vector comprising said isolated DNA molecule of claim 146.

150. (New) The vector of claim 149, wherein said vector is a viral vector.

151. (New) The vector of claim 150, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

152. (New) The vector of claim 149, wherein said vector is a naked nucleic acid vector.

153. (New) An isolated or cultured host cell stably transformed with the vector of claim 149.

154. (New) A protein obtained from culturing said transformed host cell according to claim 153, wherein said protein is TSAP 19.

155. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 19, wherein the expression of said TSAP 19 is induced during apoptosis or tumor suppression..

156. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 146.

157. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 156.

158. (New) An isolated DNA molecule encoding TSAP 20 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:12, wherein the expression of said TSAP 20 is induced during apoptosis or tumor suppression.

159. (New) The isolated DNA molecule according to claim 158, wherein said apoptosis or tumor suppression is induced by p53 or p21.

160. (New) The isolated DNA molecule according to claim 158, wherein the expression of said TSAP 20 is activated by p21 transfectants and anti-sense TSIP 2 transfectants.

161. (New) A vector comprising said isolated DNA molecule of claim 158.

162. (New) The vector of claim 161, wherein said vector is a viral vector.

163. (New) The vector of claim 162, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

164. (New) The vector of claim 161, wherein said vector is a naked nucleic acid vector.

165. (New) An isolated or cultured host cell stably transformed with the vector of claim 161.

166. (New) A protein obtained from culturing said transformed host cell according to claim 165, wherein said protein is TSAP 20.

167. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 20, wherein the expression of said TSAP 20 is induced during apoptosis or tumor suppression.

168. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 158.

169. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 168.

170. (New) An isolated DNA molecule encoding TSAP 21 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:13 wherein the expression of said TSAP 21 is induced during apoptosis or tumor suppression.

*(B)
Cont*

Sup 21

171. (New) The isolated DNA molecule according to claim 170, wherein said apoptosis or tumor suppression is induced by p53 or p21.

172. (New) The isolated DNA molecule according to claim 170, wherein the expression of said TSAP 21 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

173. (New) A vector comprising said isolated DNA molecule of claim 170.

174. (New) The vector of claim 173, wherein said vector is a viral vector.

175. (New) The vector of claim 174, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

176. (New) The vector of claim 173, wherein said vector is a naked nucleic acid vector.

177. (New) An isolated or cultured host cell stably transformed with the vector of claim 173.

178. (New) A protein obtained from culturing said transformed host cell according to claim 177, wherein said protein is TSAP 21.

179. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 21, wherein the expression of said TSAP 21 is induced during apoptosis or tumor suppression.

180. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 170.

181. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 180.

182. (New) An isolated DNA molecule encoding TSAP 22 said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:14, wherein the expression of said TSAP 22 is induced during apoptosis or tumor suppression.

183. (New) The isolated DNA molecule according to claim 182, wherein said apoptosis or tumor suppression is induced by p53 or p21.

184. (New) The isolated DNA molecule according to claim 182, wherein the expression of said TSAP 22 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

185. (New) A vector comprising said isolated DNA molecule of claim 182.

186. (New) The vector of claim 185, wherein said vector is a viral vector.

187. (New) The vector of claim 186, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

188. (New) The vector of claim 185, wherein said vector is a naked nucleic acid vector.

189. (New) An isolated or cultured host cell stably transformed with the vector of claim 185.

190. (New) A protein obtained from culturing said transformed host cell according to claim 189, wherein said protein is TSAP 22.

191. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSAP 22, wherein the expression of said TSAP 22 is induced apoptosis or tumor suppression.

192. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 182.

193. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 192.

194. (New) An isolated DNA molecule encoding TSIP 3, said isolated DNA molecule consisting of the nucleotide sequence of SEQ ID NO:15, wherein the expression of said TSIP 3 is inhibited during apoptosis or tumor suppression.

*B1
Contd*

195. (New) The isolated DNA molecule according to claim 194, wherein said apoptosis or tumor suppression is inhibited by p53 or p21.

196. (New) The isolated DNA molecule according to claim 194, wherein the expression of said TSIP 3 is activated by transfectants selected from the group consisting of p21 transfectants, TSAP 3 transfectants, and anti-sense TSIP 2 transfectants.

197. (New) A vector comprising said isolated DNA molecule of claim 194.

198. (New) The vector of claim 197, wherein said vector is a viral vector.

199. (New) The vector of claim 198, wherein said virus is an adenovirus, a retrovirus, a herpesvirus or a poxvirus.

200. (New) The vector of claim 197, wherein said vector is a naked nucleic acid vector.

201. (New) An isolated or cultured host cell stably transformed with the vector of claim 197.

202. (New) A protein obtained from culturing said transformed host cell according to claim 201, wherein said protein is TSIP 3.

203. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising an isolated DNA molecule encoding TSIP 3, wherein the expression of said TSIP 3 is inhibited during apoptosis or tumor suppression.

204. (New) A monoclonal antibody directed against the protein encoded by the isolated DNA molecule of claim 194.

205. (New) A diagnostic agent for determining the predisposition to and monitoring cancer, comprising said monoclonal antibody of claim 204.

*B
cont*